



## SEQUENCE LISTING

<110> Steward, Lance E.  
Aoki, K. Roger  
Sachs, George

<120> Methods and Compositions for the  
Treatment of Pancreatitis

<130> 17282

<140> 09/288,326

<141> 1999-04-08

<160> 15

<170> FastSEQ for windows Version 4.0

<210> 1

<211> 129

<212> PRT

<213> Homo Sapiens

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Leu Thr Gln Pro Val Pro Pro Ala Asp Pro Ala Gly Ser Gly Leu Gln  
35 40 45  
Arg Ala Glu Glu Ala Pro Arg Arg Gln Leu Arg Val Ser Gln Arg Thr  
50 55 60  
Asp Gly Glu Ser Arg Ala His Leu Gly Ala Leu Ala Arg Tyr Ile  
65 70 75 80  
Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met Ser Ile Val Lys Asn  
85 90 95  
Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser Asp Arg Asp Tyr Met  
100 105 110  
Gly Trp Met Asp Phe Gly Arg Arg Ser Ala Glu Glu Tyr Glu Tyr Pro  
115 120 125  
Ser

<210> 2

<211> 58

<212> PRT

<213> Homo Sapiens

<400> 2

Val Ser Gln Arg Thr Asp Gly Glu Ser Arg Ala His Leu Gly Ala Leu  
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Leu Ala Arg Tyr Ile Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met  
20 25 30  
Ser Ile Val Lys Asn Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser  
35 40 45  
Asp Arg Asp Tyr Met Gly Trp Met Asp Phe  
50 55

<210> 3

<211> 39

<212> PRT

<213> Homo Sapiens

<400> 3

Tyr Ile Gln Gln Ala Arg Lys Ala Pro Ser Gly Arg Met Ser Ile Val  
 1 5 10 15  
 Lys Asn Leu Gln Asn Leu Asp Pro Ser His Arg Ile Ser Asp Arg Asp  
 20 25 30  
 Tyr Met Gly Trp Met Asp Phe  
 35

<210> 4

<211> 33

<212> PRT

<213> Homo Sapiens

<400> 4

Lys Ala Pro Ser Gly Arg Met Ser Ile Val Lys Asn Leu Gln Asn Leu  
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 Asp Pro Ser His Arg Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp  
 20 25 30  
 Phe

<210> 5

<211> 12

<212> PRT

<213> Homo Sapiens

<400> 5

Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp Phe  
 1 5 10

<210> 6

<211> 9

<212> PRT

<213> Homo Sapiens

<400> 6

Arg Asp Tyr Met Gly Trp Met Asp Phe  
 1 5

<210> 7

<211> 448

<212> PRT

<213> Clostridium botulinum

<400> 7

Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly  
 1 5 10 15  
 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro  
 20 25 30  
 Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg  
 35 40 45  
 Asp Thr Phe Thr Asn Pro Glu Gly Asp Leu Asn Pro Pro Pro Glu  
 50 55 60  
 Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr  
 65 70 75 80  
 Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu  
 85 90 95  
 Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val

Arg Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys  
 Val Ile Asp Thr Asn Cys Ile Asn Val Ile Gln Pro Asp Gly Ser Tyr  
 Arg Ser Glu Glu Leu Asn Leu Val Ile Ile Gly Pro Ser Ala Asp Ile  
 Ile Gln Phe Glu Cys Lys Ser Phe Gly His Glu Val Leu Asn Leu Thr  
 Arg Asn Gly Tyr Gly Ser Thr Gln Tyr Ile Arg Phe Ser Pro Asp Phe  
 Thr Phe Gly Phe Glu Glu Ser Leu Glu Val Asp Thr Asn Pro Leu Leu  
 Gly Ala Gly Lys Phe Ala Thr Asp Pro Ala Val Thr Leu Ala His Glu  
 Leu Ile His Ala Gly His Arg Leu Tyr Gly Ile Ala Ile Asn Pro Asn  
 Arg Val Phe Lys Val Asn Thr Asn Ala Tyr Tyr Glu Met Ser Gly Leu  
 Glu Val Ser Phe Glu Glu Leu Arg Thr Phe Gly Gly His Asp Ala Lys  
 Phe Ile Asp Ser Leu Gln Glu Asn Glu Phe Arg Leu Tyr Tyr Tyr Asn  
 Lys Phe Lys Asp Ile Ala Ser Thr Leu Asn Lys Ala Lys Ser Ile Val  
 Gly Thr Thr Ala Ser Leu Gln Tyr Met Lys Asn Val Phe Lys Glu Lys  
 Tyr Leu Leu Ser Glu Asp Thr Ser Gly Lys Phe Ser Val Asp Lys Leu  
 Lys Phe Asp Lys Leu Tyr Lys Met Leu Thr Glu Ile Tyr Thr Glu Asp  
 Asn Phe Val Lys Phe Phe Lys Val Leu Asn Arg Lys Thr Tyr Leu Asn  
 Phe Asp Lys Ala Val Phe Lys Ile Asn Ile Val Pro Lys Val Asn Tyr  
 Thr Ile Tyr Asp Gly Phe Asn Leu Arg Asn Thr Asn Leu Ala Ala Asn  
 Phe Asn Gly Gln Asn Thr Glu Ile Asn Asn Met Asn Phe Thr Lys Leu  
 Lys Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg  
 Gly Ile Ile Thr Ser Lys Thr Lys Ser Leu Asp Lys Gly Tyr Asn Lys

&lt;210&gt; 8

&lt;211&gt; 423

&lt;212&gt; PRT

&lt;213&gt; Clostridium botulinum

&lt;400&gt; 8

Ala Leu Asn Asp Leu Cys Ile Lys Val Asn Asn Trp Asp Leu Phe Phe  
 Ser Pro Ser Glu Asp Asn Phe Thr Asn Asp Leu Asn Lys Gly Glu Glu  
 Ile Thr Ser Asp Thr Asn Ile Glu Ala Ala Glu Glu Asn Ile Ser Leu  
 Asp Leu Ile Gln Gln Tyr Tyr Leu Thr Phe Asn Phe Asp Asn Glu Pro  
 Glu Asn Ile Ser Ile Glu Asn Leu Ser Ser Asp Ile Ile Gly Gln Leu  
 Glu Leu Met Pro Asn Ile Glu Arg Phe Pro Asn Gly Lys Lys Tyr Glu  
 Leu Asp Lys Tyr Thr Met Phe His Tyr Leu Arg Ala Gln Glu Phe Glu

His Gly Lys 100 Ser Arg Ile Ala Leu Thr Asn Ser Val Asn 110 Glu Ala Leu  
 Leu Asn 115 Ser Arg Val Tyr Thr Phe Phe Ser Ser 125 Asp Tyr Val Lys  
 Lys 130 Val Asn Lys Ala Thr 135 Glu Ala Ala Met Phe 140 Leu Gly Trp Val Glu  
 145 Gln Leu Val Tyr Asp 150 Phe Thr Asp Glu Thr Ser Glu Val Ser Thr Thr  
 Asp Lys Ile Ala Asp 165 Ile Thr Ile Ile Ile Pro Tyr Ile Gly Pro Ala  
 Leu Asn Ile 180 Gly Asn Met Leu Tyr 185 Lys Asp Asp Phe Val 190 Gly Ala Leu  
 Ile Phe Ser 195 Gly Ala Val Ile Leu Leu Glu Phe Ile Pro Glu Ile Ala  
 210 Ile Pro Val Leu Gly Thr Phe Ala Leu Val Ser Tyr Ile Ala Asn Lys  
 225 Val Leu Thr Val Gln 230 Thr Ile Asp Asn Ala 235 Leu Ser Lys Arg Asn Glu  
 Lys Trp Asp Glu Val Tyr Lys Tyr Ile Val Thr Asn Trp Leu Ala Lys  
 260 Val Asn Thr Gln Ile Asp Leu Ile Arg Lys Lys Met Lys Glu Ala Leu  
 275 Glu Asn Gln Ala Glu Ala Thr 280 Lys Ala Ile Ile Asn Tyr Gln Tyr Asn  
 290 Gln Tyr Thr Glu Glu Glu Lys Asn Asn Ile Asn Phe Asn Ile Asp Asp  
 305 Leu Ser Ser Lys Leu 310 Asn Glu Ser Ile Asn Lys Ala Met Ile Asn Ile  
 Asn Lys Phe Leu 325 Asn Gln Cys Ser Val 330 Ser Tyr Leu Met Asn Ser Met  
 Ile Pro Tyr Gly Val Lys Arg Leu Glu Asp Phe Asp Ala Ser Leu Lys  
 355 Asp Ala Leu Leu Lys Tyr Ile Tyr Asp Asn Arg Gly Thr Leu Ile Gly  
 370 Gln Val Asp Arg Leu Lys 375 Asp Lys Val Asn Asn Thr Leu Ser Thr Asp  
 385 Ile Pro Phe Gln Leu Ser Lys Tyr Val Asp Asn Gln Arg Leu Leu Ser  
 Thr Phe Thr Glu Tyr Ile Lys 405 Thr Phe Thr Glu Tyr Ile Lys 415  
 420

&lt;210&gt; 9

&lt;211&gt; 382

&lt;212&gt; PRT

&lt;213&gt; Clostridium Botulinum

&lt;400&gt; 9

Gln Leu Phe Asn Leu Glu Ser Ser Lys Ile Glu Val Ile Leu Lys Asn  
 1 Ala Ile Val Tyr 5 Asn Ser Met Tyr Glu 10 Asn Phe Ser Thr Ser Phe Trp  
 Ile Arg Ile Pro Lys Tyr Phe Asn Ser Ile Ser Leu Asn Asn Glu Tyr  
 35 Thr Ile Ile Asn Cys Met Glu 40 Asn Asn Ser Gly Trp Lys Val Ser Leu  
 50 Asn Tyr Gly Glu Ile Ile Trp Thr Leu Gln Asp Thr Gln Glu Ile Lys  
 65 Gln Arg Val Val Phe Lys Tyr Ser Gln Met Ile Asn Ile Ser Asp Tyr  
 85 Ile Asn Arg Trp Ile Phe Val Thr Ile Thr Asn Asn Arg Leu Asn Asn  
 100 Ser Lys Ile Tyr Ile Asn Gly Arg Leu Ile Asp Gln Lys Pro Ile Ser

Asn	Leu	Gly	Asn	Ile	His	Ala	Ser	Asn	Asn	Ile	Met	Phe	Lys	Leu	Asp
130						135					140				
Gly	Cys	Arg	Asp	Thr	His	Arg	Tyr	Ile	Trp	Ile	Lys	Tyr	Phe	Asn	Leu
145					150					155					160
Phe	Asp	Lys	Glu	Leu	Asn	Glu	Lys	Glu	Ile	Lys	Asp	Leu	Tyr	Asp	Asn
				165					170					175	
Gln	Ser	Asn	Ser	Gly	Ile	Leu	Lys	Asp	Phe	Trp	Gly	Asp	Tyr	Leu	Gln
			180					185					190		
Tyr	Asp	Lys	Pro	Tyr	Tyr	Met	Leu	Asn	Leu	Tyr	Asp	Pro	Asn	Lys	Tyr
		195					200					205			
Val	Asp	Val	Asn	Asn	Val	Gly	Ile	Arg	Gly	Tyr	Met	Tyr	Leu	Lys	Gly
	210					215					220				
Pro	Arg	Gly	Ser	Val	Met	Thr	Thr	Asn	Ile	Tyr	Leu	Asn	Ser	Ser	Leu
225					230					235					240
Tyr	Arg	Gly	Thr	Lys	Phe	Ile	Ile	Lys	Lys	Tyr	Ala	Ser	Gly	Asn	Lys
				245					250					255	
Asp	Asn	Ile	Val	Arg	Asn	Asn	Asp	Arg	Val	Tyr	Ile	Asn	Val	Val	Val
			260					265					270		
Lys	Asn	Lys	Glu	Tyr	Arg	Leu	Ala	Thr	Asn	Ala	Ser	Gln	Ala	Gly	Val
		275					280					285			
Glu	Lys	Ile	Leu	Ser	Ala	Leu	Glu	Ile	Pro	Asp	Val	Gly	Asn	Leu	Ser
	290					295					300				
Gln	Val	Val	Val	Met	Lys	Ser	Lys	Asn	Asp	Gln	Gly	Ile	Thr	Asn	Lys
305					310					315					320
Cys	Lys	Met	Asn	Leu	Gln	Asp	Asn	Asn	Gly	Asn	Asp	Ile	Gly	Phe	Ile
			325						330					335	
Gly	Phe	His	Gln	Phe	Asn	Asn	Ile	Ala	Lys	Leu	Val	Ala	Ser	Asn	Trp
			340					345					350		
Tyr	Asn	Arg	Gln	Ile	Glu	Arg	Ser	Ser	Arg	Thr	Leu	Gly	Cys	Ser	Trp
		355					360					365			
Glu	Phe	Ile	Pro	Val	Asp	Asp	Gly	Trp	Gly	Glu	Arg	Pro	Leu		
	370					375					380				

&lt;210&gt; 10

&lt;211&gt; 4835

&lt;212&gt; DNA

&lt;213&gt; Clostridium botulinum

&lt;400&gt; 10

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tatttatttc	caattgttta	accctatctt	ataacggtaa	atatatatgt	ttatctatga	240
aagatgaaaa	ccataattgg	atgatatgta	ataatgatat	gtcaaagtat	ttgtatttat	300
ggtcatttaa	ataattaata	atttaattaa	ttttaaatat	tataagaggt	gttaaatatg	360
ccatttggtta	ataaacaatt	taattataaa	gatcctgtaa	atggtgttga	tattgcttat	420
ataaaaaattc	caaatgcagg	acaaatgcaa	ccagtaaaaag	cttttaaaat	tcataataaa	480
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ccaccagaag	caaaaacaagt	tccagtttca	tattatgatt	caacatattt	aagtacagat	600
aatgaaaaag	ataattattt	aaagggagtt	acaaaattat	ttgagagaat	ttattcaact	660
gatcttgga	gaatgttgtt	aacatcaata	gtaaggggaa	taccattttg	gggtggaagt	720
acaatagata	cagaattaaa	agttattgat	actaatgtga	ttaatgtgat	acaaccagat	780
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gtaaattaca	caatatatga	tggattTTaat	ttaagaaata	caaatttagc	agcaaacttt	1560
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&lt;210&gt; 11

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<400> 11  
 Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro  
 1 5 10 15

<210> 12  
 <211> 5  
 <212> PRT  
 <213> Generic Zinc Binding Domain

<220>  
 <221> BINDING  
 <222> 3, 4  
 <223> Xaa=Ala,Cys,Asp,Glu,Phe,Gly,His,Ile,Lys,Leu,Met,Asn, Pro, Gln,Arg,Ser,Thr,Val,Trp orTyr

<400> 12  
 His Glu Xaa Xaa His  
 1 5

<210> 13  
 <211> 5  
 <212> PRT  
 <213> Clostridium species

<400> 13  
 His Glu Leu Ile His  
 1 5

<210> 14  
 <211> 5  
 <212> PRT  
 <213> Clostridium species

<400> 14  
 His Glu Leu Asn His  
 1 5

<210> 15  
 <211> 5  
 <212> PRT  
 <213> Clostridium species

<400> 15  
 His Glu Leu Thr His  
 1 5